REMARKS/ARGUMENTS

Claims 1-7, 9-34 and 36-47 are pending.

The paragraph beginning on page 8 and ending on page 9 of the specification is amended to add an antecedent basis for mixtures of different fibers found in original claims 5, 16, 27, 39 and 43. Support for this amendment is found in the original claims. Therefore, no new matter is added.

Claim 13 is amended to clarify the initial scope of the claim that a reinforcing fiber is added to heated polyol and isocyanate solutions. Support for this amendment is found throughout the specification. Accordingly, no new matter is added.

Claim 23 is amended in accordance with claim 1.

Claim 34 is amended to clarify the initial scope of the claim that aramid and other fibers are sprayable, and to provide a basis for the percent value recited in the claim. Claim 36 depends from claim 34 and is accordingly amended. Support for this amendment is found throughout the specification. Accordingly, no new matter is added.

Claims 18-22 are canceled.

In the Office Action, claims 1-3, 5, 7, 10-12 and 14 were rejected under 35 USC § 102(b) as anticipated by U.S. Patent No. 5,614,575 to Kotschwar. Claims 15-17 were rejected under 35 USC § 103(a) as obvious over U.S. Patent No. 3,837,575 to Lehnert in view of U.S. Patent No. 4,096,997 to Larson and U.S. Patent Nos. 4,121,619 and 4,570,669 to Pauliukonis. Claims 4, 6, 9, 13, 23-33, 34 and 36 were rejected under 35 USC § 103(a) as obvious over Kotschwar, and further in view of U.S. Patent No. 4,857,569 to Cotts et al., U.S. Patent No. 5,240,969 to Brown, and U.S. Patent No. 4,857,579 to Domeier. Claims 37-46 were rejected under 35 USC § 103(a) as obvious over Kotschwar in view of Cotts et al., Brown, and Domeier, and further in view of U.S. Patent No. 4,960,349 to Willibey et al. and U.S. Patent No. 5,558,245 to White.

Rejection under 35 USC § 102

The rejection of claims 1-3, 5, 7, 10-12 and 14 as anticipated by Kotschwar is respectfully traversed. Kotschwar describes a two component polyurethane system in which an isocyanate component is combined with a polyol component while spraying each component individually into a mold (col. 2, ln. 15-18). A fiber material is preferably added as the isocyanate and polyol components are combined, or added to the polyol component prior to combining with the isocyanate component. However, Kotschwar does not heat the polyol component prior to spraying.

"To anticipate a claim, the reference must teach every element of the claim." MPEP § 2131. In the present case, Kotschwar fails to achieve this standard.

Claims 1-3, 5, 7, 10-12 and 14 call for heating of a polyol component and an isocyanate component, adding fibrous material to one or both components, then reacting the components to create a polymer. Although Kotschwar teaches in a less preferred method that a fiber can be added to a polyol before combining with an isocyanate, Kotschwar says nothing about heating the polyol before adding the fiber. Rather, as taught at column 9, lines 65-66, the polyol and isocyanate components are heated to a temperature between about 140 °F and about 160 °F only "during spraying." Thus, as taught by Kotschwar, the fiber is added to the polyol and then the polyol and fiber are heated while spraying. Because Kotschwar does not teach or suggest the heating of polyol before adding fiber, Kotschwar does not teach every element of claims 1-3, 5, 7, 10-12 and 14. Accordingly, Kotschwar does not anticipate these claims.

Rejections under 35 USC § 103

The rejection of claims 15-17 as obvious over Lehnert in view of Larson and Pauliukonis is respectfully traversed. Lenhert describes a spray gun for mixing two or more reactive components. Each component is relayed to the gun by separate fluid supply hoses (col. 1, ln. 58-62). Therefore, the spray gun has more than one supply hose for transporting the reactive components. Larson describes a spray nozzle for mixing two or more reactive components. As with the device of Lenhert, each component is relayed to the nozzle by separate supply lines (col. 2, ln. 22-34). Pauliukonis describes a springless check valve and a series of tapered valves.

"To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." MPEP § 2143.04. In the present case, the combination of the Lehnert, Larson and Pauliukonis references fails to achieve this standard.

Claims 15-17 call for a spray nozzle comprising a single hose for conveying first and second reactant materials. This contrasts with the spray gun of Lenhert and the spray nozzle of Larson which have two or more supply hoses, each for transporting a single reactant material. Neither Lenhert nor Larson describe or even mention a single hose for conveying two reactant materials. As for the Pauliukonis references, Pauliukonis does not even describe a spray device. Because all claim limitations are not taught or suggested by the references, claims 15-17 are not obvious.

The rejection of claims 4, 6, 9, 13, and 23 – 33, 34 and 36 as obvious over Kotschwar, and further in view of Cotts et al., Brown and Domeier is respectfully traversed. Cotts et al. describe polyurethane and polyamide blends prepared by mixing a polyurethane component with a polyamide component in a common solvent, or by polymerizing polyamide in a polyurethane-containing solvent. However, Cotts et al. do not describe a process in which a polyamide is added to a polyol solution or an isocyanate solution. Both Brown and Domeier describe reinforced polyurethane resins prepared by combining a polyol with a fiber, then reacting the polyol with an isocyanate followed by dispensing in a mold. However, neither Brown nor Domeier describe the heating of polyol or isocyanate solutions before adding fibers.

Claims 4, 6, 9, 13, and 23 - 33 call for adding fibrous material to a polyol solution and/or an isocyanate solution which are heated before adding the material. Although Cotts et al., Brown and Domeier describe reinforced polymers, none describe or even mention a process in which a polyol or isocyanate solution is heated prior to adding reinforcing fibers. As discussed above in the "Rejection under 35 USC § 102" section, Kotschwar also fails to teach or suggest heating the polyol before adding fibers. Because all claim limitations are not taught by the references, claims 4, 6, 9, 13, and 23 - 33 are not obvious.

Claims 34 and 36 call for a polyurethane composition comprising a sprayable aramid fiber or a sprayable mixture of aramid and other fibers. As the Office Action admits, Kotschwar is silent with respect to the use of aramid (KELVAR) fibers and their sprayability. However, according to the Office Action, it would have been obvious to combine the

teachings of Kotschwar, Cotts e al. and Domeier to give the compositions in claims 34 and 36.

To establish a *prima facie* case of obviousness, "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings." MPEP § 2143. "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." MPEP § 2143.01.

Although Cotts et al. describe polyurethane and polyamide-containing compositions, the compositions are strictly thermoplastic polymers that are spun, extruded, molded or cast (col. 3, ln. 57 - col. 4, ln. 5). Nothing suggests that the polyamide components can be sprayed or that the polyamide components can be used to prepare sprayable compositions. Moreover, Cotts et al. are concerned solely with polyurethane and polyamide in common or mutually compatible solvents (col. 3, ln. 38-55), not with solvent-free polyurethanes as called for in claims 34 and 36. Because Cotts et al. are strictly concerned with the use of solvents, do not contemplate sprayable compositions, and do not indicate that polyamide components can be sprayed, Cotts et al. do not suggest the use of sprayable aramid fibers in solvent-free polyurethane systems. Accordingly, there is no suggestion or motivation to combine the teachings of Cotts et al. and Kotschwar.

As for the Domeier reference, Domeier is concerned only with fiber-containing thermoset resin compositions that are molded (see Abstract). Nothing suggests that the polyamide components can be sprayed or that the polyamide components can be used to prepare sprayable compositions. Because Domeier does not contemplate sprayable compositions or that aramid fibers can be sprayed, Domeier does not suggest the use of sprayable aramid fibers in sprayable polyurthane systems. Accordingly, there is no suggestion or motivation to combine the teachings of Domeier and Kotschwar.

Although Kotschwar, Cotts et al. and Domeier could be combined, nothing in the references suggests the desirability of doing so. There is no indication, based on these references, that aramid fibers could be used in a sprayable, solvent-free polyurethane composition. Accordingly, claims 34 and 36 are not obvious over the references.

The rejection of claims 37-46 as obvious over Kotschwar, Cotts et al., Brown and Domeier and further in view of Willibey et al. and White is respectfully traversed. Claims 37-46 call for a geotextile fabric sprayed with a reinforced polyurethane. The Office Action admits that Kotschwar, Cotts et al., Brown and Domeier are silent with respect to geotextile fabrics. However, according to the Office Action, Willibey et al. can be combined with Kotschwar to provide a geotextile fabric sprayed with reinforced polyurethane.

Willibey et al. describe a geotextile grid which can be coated with a plastic material, preferably polyvinylchloride. According to the Office Action, it would have been obvious to coat the geotextile grid of Willibey et al. with a reinforced polyurethane to strengthen the grid. However, the coating of Willibey et al. is not added for strength reinforcement. Rather, Willibey et al. teach at column 2, lines 12-19 that the coating for the geotextile grid is chosen "independent of strength considerations" since the strength of the grid is solely "determined by the yarn size, structure and spacings" of the geotextile grid. Thus, Willibey et al. teach that the strength of the geotextile grid is not determined by the coating, and is sufficient without a coating. Because increasing the coating strength is not a consideration in the Willibey et al. patent, there is no suggestion or motivation to combine the teachings of Willibey et al. with Kotschwar.

Moreover, the grid of Willibey et al. "can be manufactured for strength in one direction" only (col. 1, ln. 63-65). Covering such a grid with a uniformly reinforced coating produced by mixing a fiber throughout a polymer resin (such as described in Kotschwar) would interfere with the directional strength of the grid. Thus, Willibey et al. teach away from covering a grid with a reinforced coating.

Although Willibey et al. and Kotschwar could be combined, nothing in the references suggests the desirability of doing so. Accordingly, claims 37-46 are not obvious over these references.

As for the White reference, White describes a storage tank having a geotextile padding located between the tank wall and an inner storage liner. White neither describes nor mentions the addition of a polymer coating to the geotextile padding. Therefore, White provides no suggestion or motivation for a coated geotextile fabric, and does not render claims 37-46 obvious.

In view of the foregoing amendments and remarks, Applicants submit that the present application is in condition for allowance. A Notice of Allowance is therefore respectfully requested.

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